



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/719,955	03/15/2001	Stephen Karl Heeks	C1043/7028	5248
21127	7590	11/16/2005	EXAMINER	
KUDIRKA & JOBSE, LLP ONE STATE STREET SUITE 800 BOSTON, MA 02109			MENGISTU, AMARE	
			ART UNIT	PAPER NUMBER
			2673	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/719,955

Applicant(s)

HEEKS ET AL.

Examiner

Amare Mengistu

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 17-25 and 28-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-14 and 17-23 is/are allowed.
- 6) ☒ Claim(s) 24 and 28-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/6/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recitation of claim 1, **“a structure for spatially and/or spectrally narrowing light emission.... the structure comprising an interface structure, a cavity structure and /or a micro cavity structure”**, **“a light switching unit”** In claims 24,25 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

Art Unit: 2673

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over **MAY Paul** (WO 96/33483) in view of **Gostick Mark** (WO 97/38347)

4. As to claims 24, **MAY** discloses a display device comprising: a light switching unit having an array of pixels each operable to vary the transmission of light there through (fig.6 (28), figs.2, 5 (P), page 10, lines 4-16, page 8, lines 3-13), a backlight comprising a first series of light emissive material having a first emission color and a second series of linear regions of light emissive material having a second emission color, each linear region of organic material being located so as to lie behind a plurality of pixels of the array in the viewing direction for backlighting those pixels (fig.6,8,9 (17,LER), page 12, last 3, lines – page 13, lines 15).

MAY did not expressly detailed that an organic light emissive and one of the light emissive being formed by a selective deposition process. However, the

Art Unit: 2673

patent of **Gostick Mark** (hereinafter **Mark**) clearly states that it is well known for a backlight to have an organic light emissive which is formed by deposition process (see, page 11).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to have been motivated to incorporate the **Mark method** of an organic light emissive formed by deposition process substituted with **MAY's** light emissive backlight, because this will allow an effeicient backlight which provide an expensive full color display system.

5. Claims 25,28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **MAY Paul** (WO 96/33483) in view of **Go stick Mark** (WO 97/38347) and **Yokoi Hideto** (EP 0 702 251 A2).

As to claims 25,28-31, **MAY** also discloses a light emissive display system having a series of grooves on a substrate (fig.6 (LER), (19)), depositing by means of ink jetting some of the groove a first linear region of light emissive a first color (fig.6 (LER), Figs. 8,9 (ZR)), depositing some of the groove a second linear region of light emissive a second emissive color (fig.6 (LER), Figs. 8,9 (ZG)), locating the grooves such that the light emissive in each groove lies behind a respective plurality of pixels to the array in the viewing direction for backlighting (fig.6 , grooves (17), Light emissive, back light (LER), pixel (2,3).

MAY did not expressly detailed that the linear regions are organic light emissive material.

Art Unit: 2673

Gostick Mark (hereinafter **Mark**) clearly states that it is well known for a backlight for the linear regions to have an organic light emissive material (see, page 11).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to have been motivated to incorporate the **Mark method** of an organic light emissive formed by deposition process substituted with **May's** light emissive backlight, because this will allow an efficient backlight which provide an expensive full color display system

MAY has failed to teach that the light emissive groove is deposited by means of **ink jetting**. **Yokoi Hideto** is cited to teach that it is well known for the light emissive grooves to be deposited by ink jetting (see, page 4, col.2, lines 55-58, col.2, lines 8-20).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to have incorporated the light emissive ink jetting depositing system of **Yokoi Hideto** into the display device of **MAY**, since this will change the arrangement of the interval of the color filter elements and change of arrangement of the filter elements, due to temperature change which cause white emissions in the filter element.

Allowable Subject Matter

6. Claims 1-14,17-23 are allowed.
7. The following is an examiner's statement of reasons for allowance: the cited references failed to teach the recited claim "*a structure for spatially...a micro cavity structure.*"

Art Unit: 2673

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

8. Applicant's arguments with respect to claims 1-14,17-25,28-31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on May 06,2005 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will


Art Unit: 2673

the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amare Mengistu whose telephone number is (571) 272-7674. The examiner can normally be reached on M-F,T-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Amare Mengistu
Primary Examiner
Art Unit 2673

Nov.9,2005